

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fault-tolerant server comprising:

- (a) a communications link;
- (b) a first Central Processing Unit, (CPU), in electrical communication with the communications link and capable of transmitting a first information stream;
- (c) a second CPU, in electrical communication with the communications link and capable of transmitting a second information stream;
- (d) a first Input/Output (I/O) subsystem, in electrical communication with the first CPU, the second CPU and with the communications link, configured to compare the first information stream and the second information stream; and
- (e) a first local mass storage device~~second Input/Output (I/O) subsystem~~ in electrical communication with the first ~~I/O subsystem, CPU, the second CPU and the communications link, configured to compare the first information stream and the second information stream;~~
- (f) a first local mass storage device in electrical communication with both the first CPU and the second CPU, and
- (g) a second local mass storage device in electrical communication with both the first CPU and the second CPU,

wherein the first I/O subsystem is configured to selectively access~~accesses~~ the first local mass storage device in response to~~based upon its~~ comparison of the first and second information streams.

2. (Currently Amended) The fault-tolerant server of claim 1 ~~further comprising:~~

~~a second Input/Output (I/O) subsystem in electrical communication with the second CPU and with the communications link configured to compare the first information stream and the second information stream; and~~

~~a second local mass storage device in electrical communication with the second I/O subsystem,~~ 1, wherein the second I/O subsystem is configured to selectively access~~accesses~~ the second local mass storage device in response to~~based upon its~~ comparison of the first and second information streams.

3. (Currently Amended) The fault-tolerant server of claim 2 wherein ~~at least one of the first I/O subsystem and CPU can access the second I/O subsystem are in electrical communication with at least one of the first local mass storage device and the second local mass storage device~~through the second I/O subsystem.

4. (Currently Amended) The fault-tolerant server of claim 2 wherein the communications link further comprises a ~~respective~~first switching fabric in electrical communication with the ~~respective~~first CPU.
5. (Currently Amended) The fault-tolerant server of claim 4 wherein the first switching fabric is in electrical communication with ~~at least one of~~both the first I/O subsystem and the second I/O subsystem.
6. (Currently Amended) The fault-tolerant server of claim 5 wherein ~~thea~~ second switching fabric is in electrical communication with the ~~other one of~~second CPU, the first I/O subsystem and the second I/O subsystem.
7. (Currently Amended) The fault-tolerant server of claim 2 ~~4~~ wherein each switching fabric further ~~comprising~~comprises a delay module in electrical communication with at least one of the first I/O subsystem and the second I/O subsystem to buffer and delay transmission of at least one of the first and second information streams.
8. (Original) The fault-tolerant server of claim 1 wherein the communications link comprises a backplane.
9. (Original) The fault-tolerant server of claim 8 wherein the communications link further comprises a backplane link in communication with the backplane.
10. (Previously Presented) The fault-tolerant server of claim 1 wherein the first CPU and the second CPU further comprise a 1U rack-mount motherboard.
11. (Currently Amended) The fault-tolerant server of claim ~~12~~, wherein the first local mass storage device is located on a same motherboard as the first CPU and the second local mass storage device is located on a same motherboard as the second CPU.
12. (Currently Amended) The fault-tolerant server of claim ~~2 1~~ wherein the second local mass storage device is located on a same motherboard as the second CPU2, wherein each I/O subsystem is configured to issue a stop command to at least one of the first and the second processors upon detecting a discrepancy between the first and second information streams.
13. (Currently Amended) A method for ~~accessing at least one of a first local mass storage device and a second local mass storage device~~ storing data in a fault-tolerant server, the method comprising the steps of:
 - (a) establishing communication between a first ~~Central Processing Unit (CPU) and a first local mass storage device capable of transmitting a first information stream~~ CPU, a communications link, a first I/O subsystem and a second I/O subsystem;
 - (b) establishing communication between a second CPU ~~and a second local mass storage device capable of transmitting a second information stream,~~ the communications link, the first I/O subsystem and the second I/O subsystem;
 - (c) at each of the first and second I/O subsystems, comparing the first information stream and the second information stream through the use of a first Input/Output (I/O) subsystem, in

~~communication with the first CPU and the first local mass storage device; and~~information streams transmitted by the first and the second CPUs over the communications link;

~~(d) selectively accessing, by~~if the information streams are determined to be different by either the first I/O subsystem, the first local or the second I/O subsystem, issuing a stop command;

~~(e) otherwise, storing data from the information stream on both a first mass storage device in response~~local to a comparison of the first and second information streams~~the first I/O subsystem and a second mass storage device local to the second I/O subsystem.~~

14. (Currently Amended) The method of claim 13 further comprising ~~the steps of:~~

~~(eg) comparing~~if the first information stream and CPU fails, allowing the second information stream~~CPU to access the first mass storage device through the use of a second Input/Output (I/O)~~first I/O subsystem, in communication with the second CPU and the second local mass storage device; and,

~~(f) selectively accessing, by the second I/O subsystem, the second local mass storage device in response to a comparison of the first and second information streams.~~

15. (Currently Amended) The method of claim 14 further comprising:

~~storing a datum in one of the first local mass storage device and the second local mass storage device, and~~storing the datum in the other one of the first local mass storage device and (h) if the second CPU fails, allowing the first CPU to access the second local mass storage device by mirroring software~~through the second I/O subsystem.~~

16. (Currently Amended) The method of claim 13 further comprising the step of ~~communicating with a backplane~~allowing either CPU to access both the first and the second mass storage devices.

17. (Original) The method of claim 13 ~~further comprising introducing a parity bit to detect an error in the established communication.~~16 wherein the first CPU may only access the second mass storage device upon the failure of the first mass storage device.

18. (Original) The method of claim 13 further comprising the step of communicating with a 1U rack-mount motherboard.

19. (Currently Amended) The method of claim 14 ~~further comprising the step of communicating with at least one of~~13 wherein the first I/O-subsystem and the second I/O subsystem ~~over~~are connected via a switching fabric.

20. (Currently Amended) The method of claim 14 ~~13 further comprising the step of delaying the accessing of at least one of the first local mass storage device and the second local mass storage device~~buffering and delaying first and second information streams.

21. (Currently Amended) An apparatus for accessing at least one of a first local mass storage device and a second local mass storage device in a fault-tolerant server, the apparatus comprising:

(a) a means for establishing communication between a first ~~Central Processing Unit (CPU)~~ and a first local mass storage device capable of transmitting a first information stream;

(b) a means for establishing communication between a second CPU and a second local mass storage device capable of transmitting a second information stream;

(c) a first Input/Output (I/O) subsystem means, in communication with the first CPU and the first local mass storage device, configured to compare the first information stream and the second information stream; ~~and~~

(d) a means for ~~selectively~~ accessing, by the first I/O subsystem, the first local mass storage device in response to a comparison of the first and second information streams;

(e) a means for directly accessing, by the first CPU, the second local mass storage device in the event of a failure of the first local mass storage device.

22. (Currently Amended) The method of claim 13 further comprising the step of executing instructions on the second CPU in lockstep with the first CPU.

23. (Cancelled).

24. (Cancelled).